

EMR: SECRETS FOR COLONIC LESIONS

Rafael Barreto-Zuñiga, MD

Professor of Medicine, Endoscopy Department, National Institute of Medical Science and Nutrition “Salvador Zubiran” INCMNSZ, Mexico City, Mexico

Disclosure

Educational grant to our institute, the authoring physician of this presentation is consultant to Olympus Corporation of the Americas.

Advanced Endoscopic Resection Techniques for the Treatment of Colorectal Superficial Lesions

Snare polypectomy

Endoscopic Mucosal Resection (EMR)

Endoscopic Submucosal Dissection (ESD)

Minimally invasive curative treatments



The Difficult Colorectal Polyp

- Difficult polyps (10% to 15%) because of their size, location, and/or morphology.
- Definition: refers to polyps not amenable to endoscopic removal by the average endoscopist.
- Patient-specific and polyp-specific factors impact the approach to difficult polyps.
- Conventional and advanced endoscopic techniques are usually successful in removing precancerous polyps with low complication rates.



DIFFICULT COLORECTAL POLYPS

Box 1

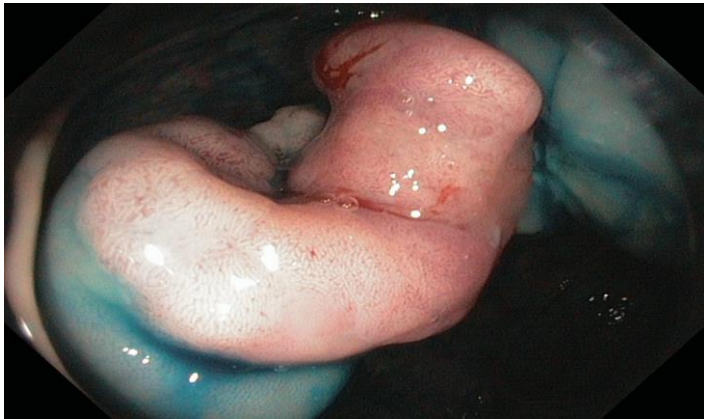
Features of the difficult colorectal polyp

1. Macroscopically benign
2. Large (typically >20 mm)
3. Flat or sessile
4. Located around folds or kinks
5. Most in right colon or cecum
6. Large pedunculated polyps with thick stalk

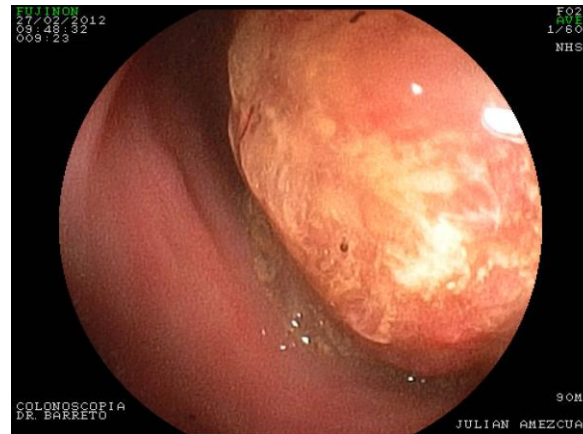
DIFFICULT COLORECTAL POLYPS



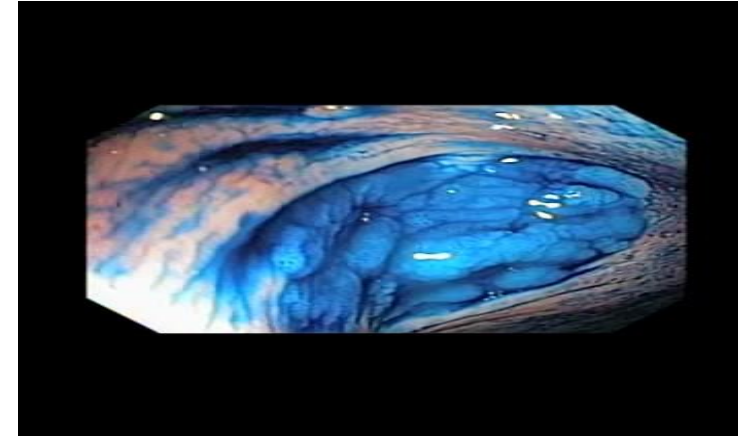
ENDOSCOPIA GASTROINTESTINAL



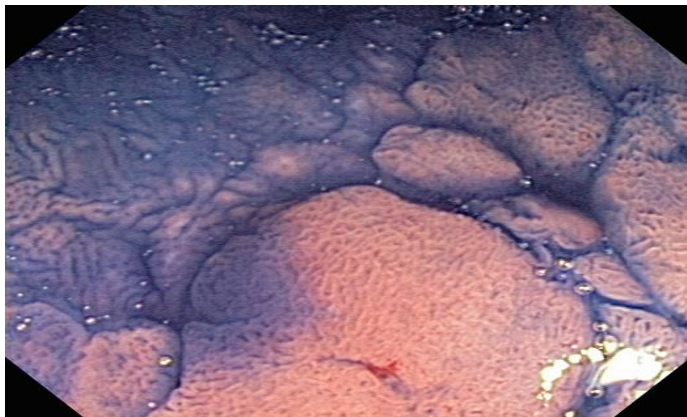
Paris Is 30-40mm; Right colon
Adenoma 75 Y male- ASA 2



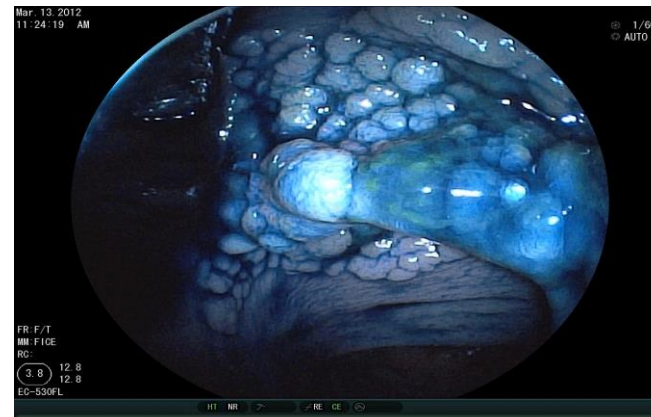
Paris- Ips 30-40mm sigma
74 Y Male; ASA 4



Paris 0-IIa; 10-15mm; Right ; Serrated
62 Y Female - ASA 1



Paris 0-IIa 30-40mm; Right colon
Adenoma ; 56 female- ASA 2



Paris 0-IIa LSTG 40-50mm; Right
Adenoma 50 Y male- ASA 1



Paris 0-IIc; 20-30mm; Right colon
Adenoma 55 Y male- ASA 2

NON-POLYPOID NEOPLASTIC COLORECTAL POLYPS



ENDOSCOPIA GASTROINTESTINAL

OCCIDENTAL STUDIES PREVALENCE OF NON-POLYPOID NEOPLASTIC COLORECTAL POLYPS

Author, año,(Ref.)	N	# Adenomas	# NP-CRNs	% adenomas NP
Hurlstone ¹³ 2003	850	733	285	39
Jaramillo ¹⁴ 1995	232	261	109	42
Kahi ¹⁵ 2009	660	780	338	43
Rembacken ¹⁰ 2000	1000	321	117	36
Rex ³ 2007	434	798	430	54
Saitoh ¹¹ 2001	211	139	57	41
Soetinko ⁴ 2008	1819	1535	227	15
Tsuda ¹² 2002	371	973	66	7
Barreto ¹⁷ 2001	351	114	19	16

Modify from, *Gastrointestinal Endoscopy Clinics of North America*, Volume 20, Issue 3, July 2010, Pages 407-415

Charles J. Kahi, David G. Hewett, Douglas K. Rex

Prevalence and clinico-pathological features of non-polypoid Lesions at INCMNSZ Mexico City, Mexico.



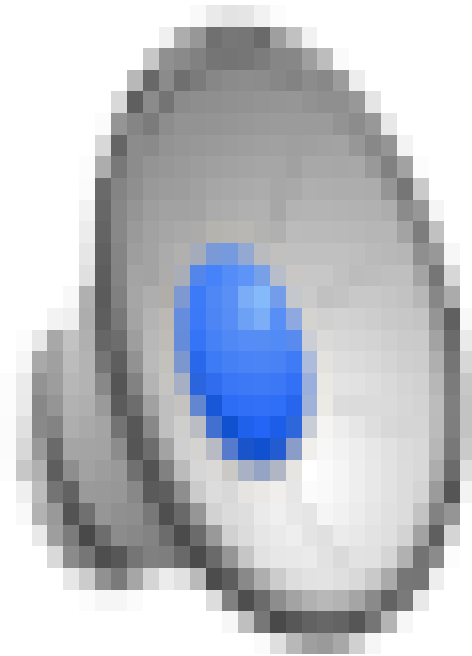
Barreto-Zuñiga R, Torres-Rubi D, Zepeda-Gomez S.

Background: To characterize clinical/histology and prevalence of the non-polypoid neoplastic colorectal polyps for diagnosis.

Methods: cohort transversal study, n= 569 cases, collected from the Department of Endoscopy at National Institute of medical Science and Nutrition; Mexico City from January 2002 to December 2006 and their clinical and pathological characteristics were reviewed.

Results: average rate was 65.7 + 12.8 years old. From 58 patients a total of 77 flat elevated polyps lesions (NP non polypoid) with prevalence of 9.8% (59/569 reports) were found in the study cohort including range 10-20mm (42.8%)

Conclusions: For non- polypoid neoplastic colorectal lesions (NPCR), the average age of patients is 65 years. The polyps generally involve the sigmoid descending colon and rectum. The most common pathological type is adenoma and the most common treatment was mucosal endoscopic resection (41.6%)



- **Type: LST-G (Mix)**
- **Plan: EMR “bloc”**
- **1st our Institute 2002**
- **“Sombrero de Charro” Like (Hat**
- **Indigo Carmin to Barreto%**
- **Diagnosis: LST**
- **Granular/Nodular**
- **Tubular adenoma**
- **HGD**



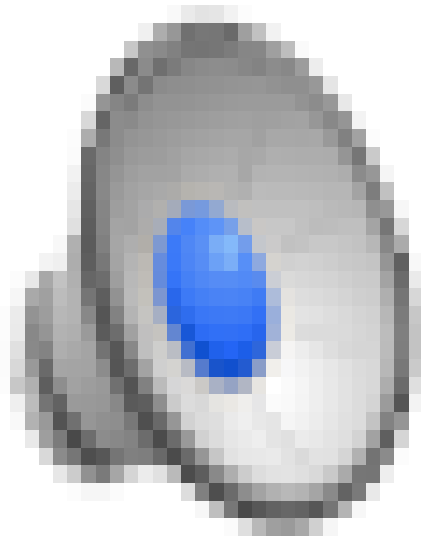
EMR: Secrets for Colonic Lesions

- Mental concentration at 110% (fatigue curve); always use CO2
- Colonoscopy technique (Highly skilled insertion) skills to keep the scope at appropriate position (6 o'clock)
- Assistant with experience in EMR; knowledge of oldest and newest accessories
- Understanding how to find and diagnose lesions (Lesion assessment using the Paris classification, Surface topography, Kudo pit-pattern and Sano vascular patterns)

Technique EMR: Assisted polypectomy submucosa injection (APSI)



ENDOSCOPIA GASTROINTESTINAL

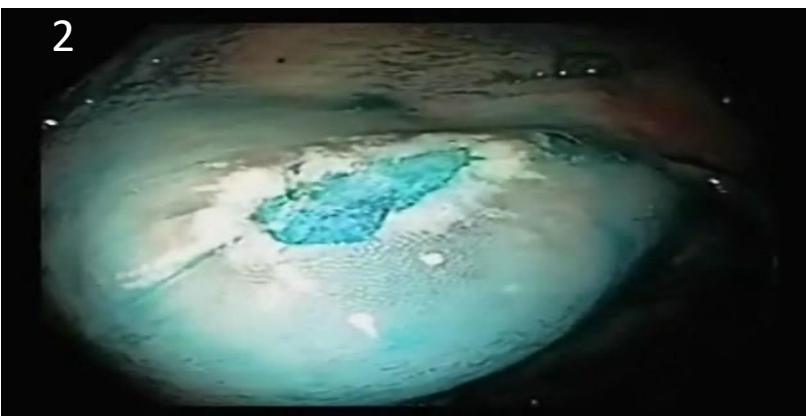
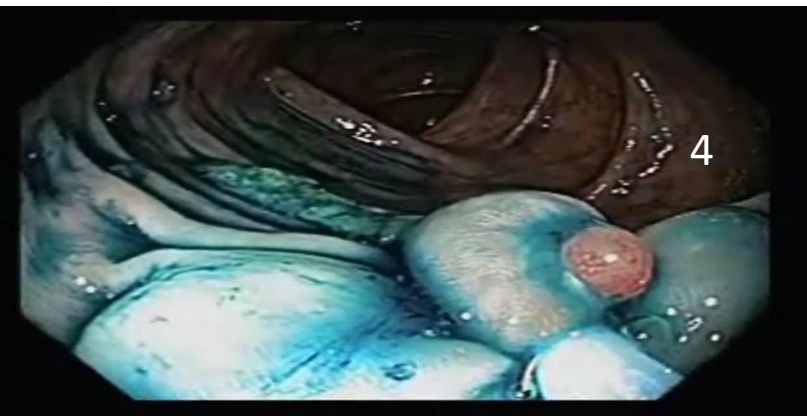
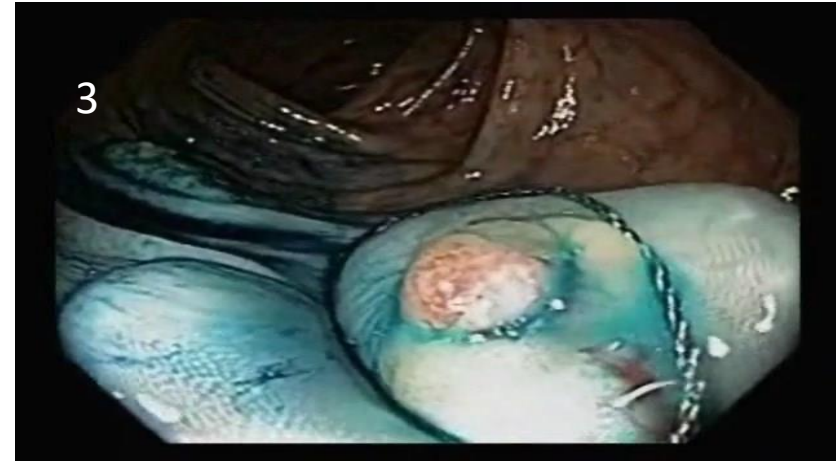
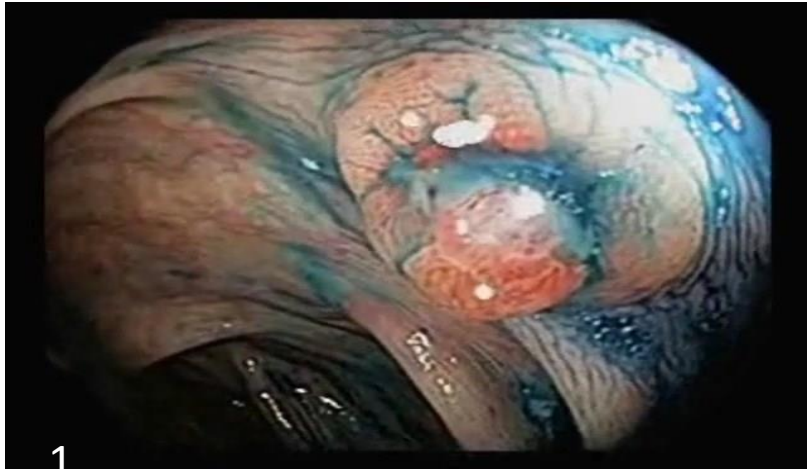


Submucosa injectate is mixed with hypertonic or normal saline solution and indigo carmine (0.06%). Open snare is placed around the polyp and snare about 3mm of normal mucosa around base of polyp, then the polyp is resected with electrocautery vs so-called conventional snare polypectomy

Technique: Assisted polypectomy submucosa injection (PASI) EMR??



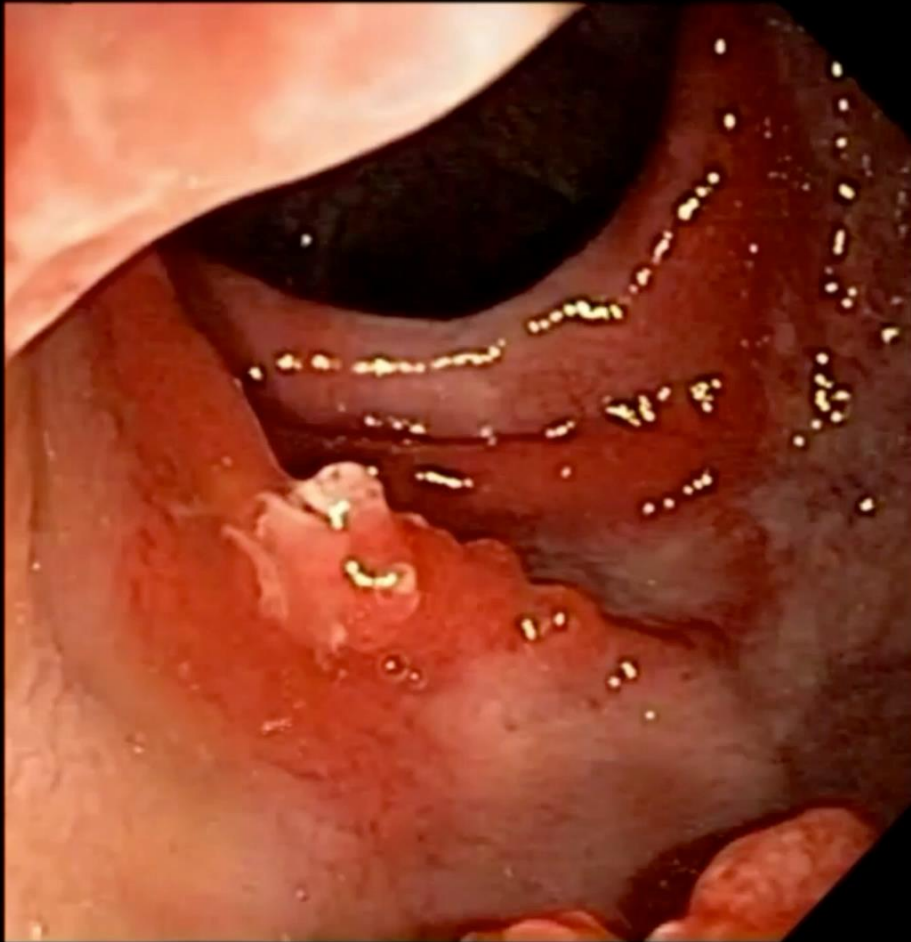
ENDOSCOPIA GASTROINTESTINAL



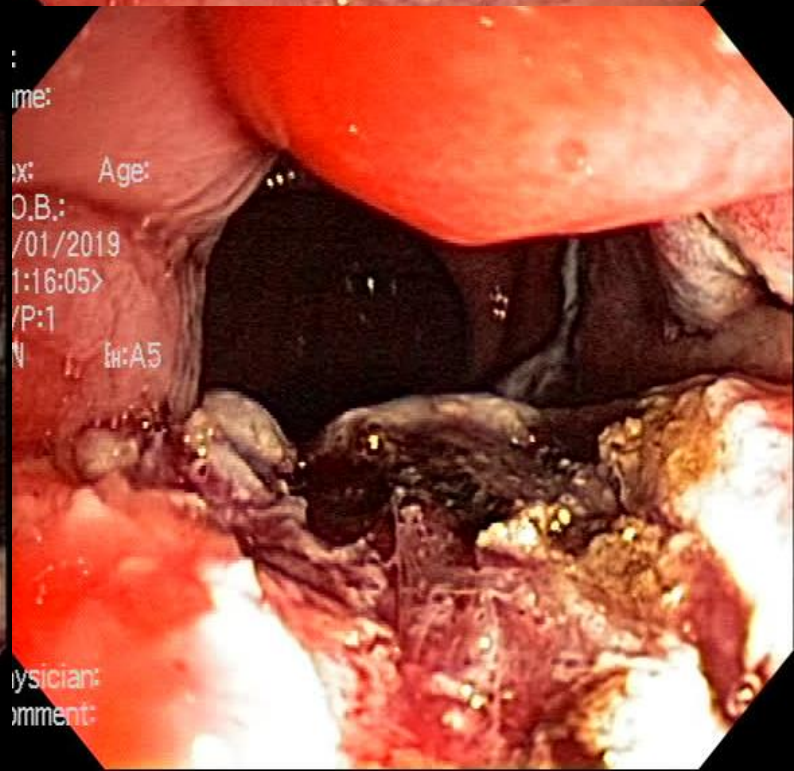
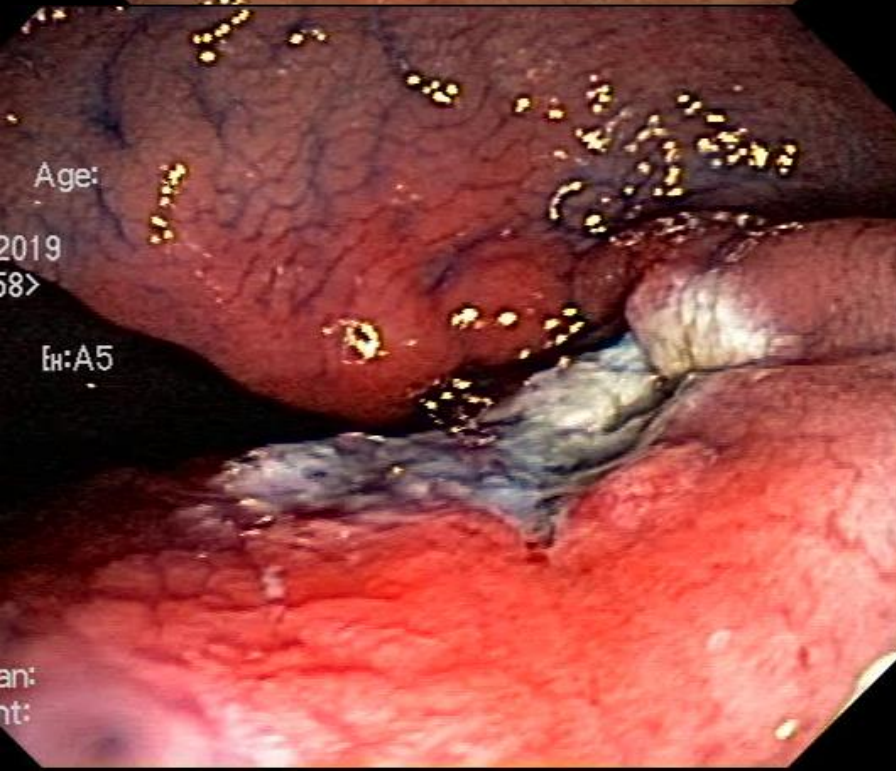
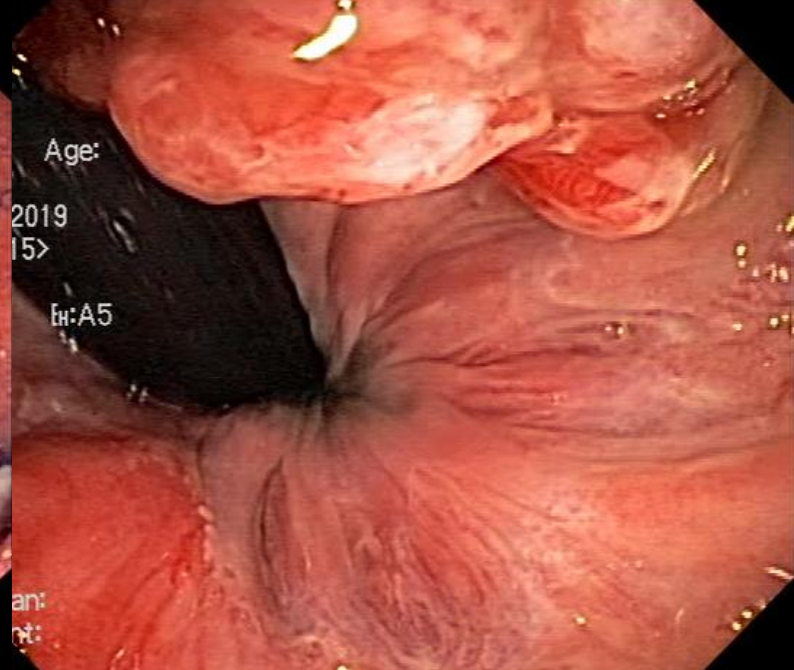
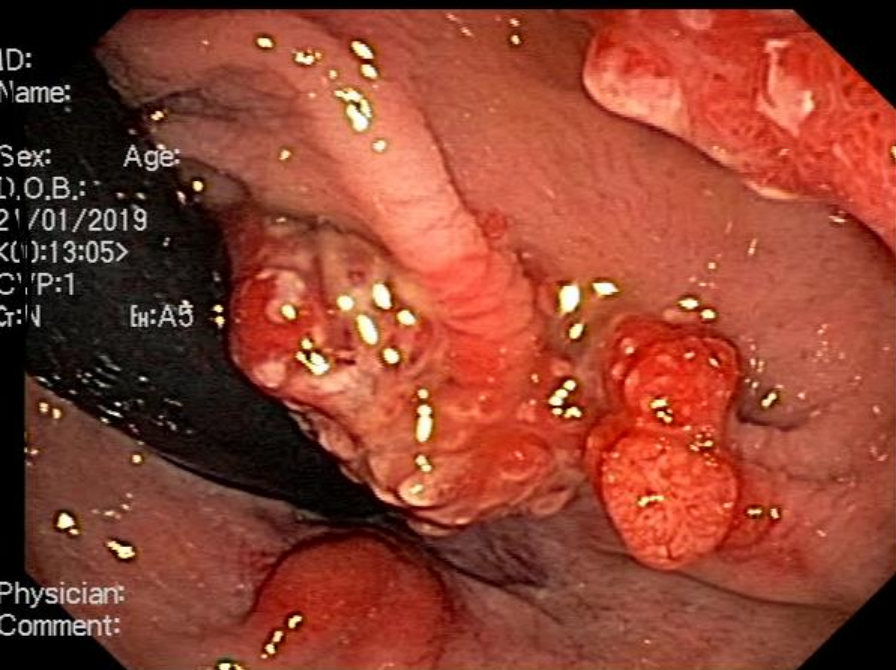
Complex Colon Polyps: EMR From polyps Prolapse syndrome



ENDOSCOPIA GASTROINTESTINAL



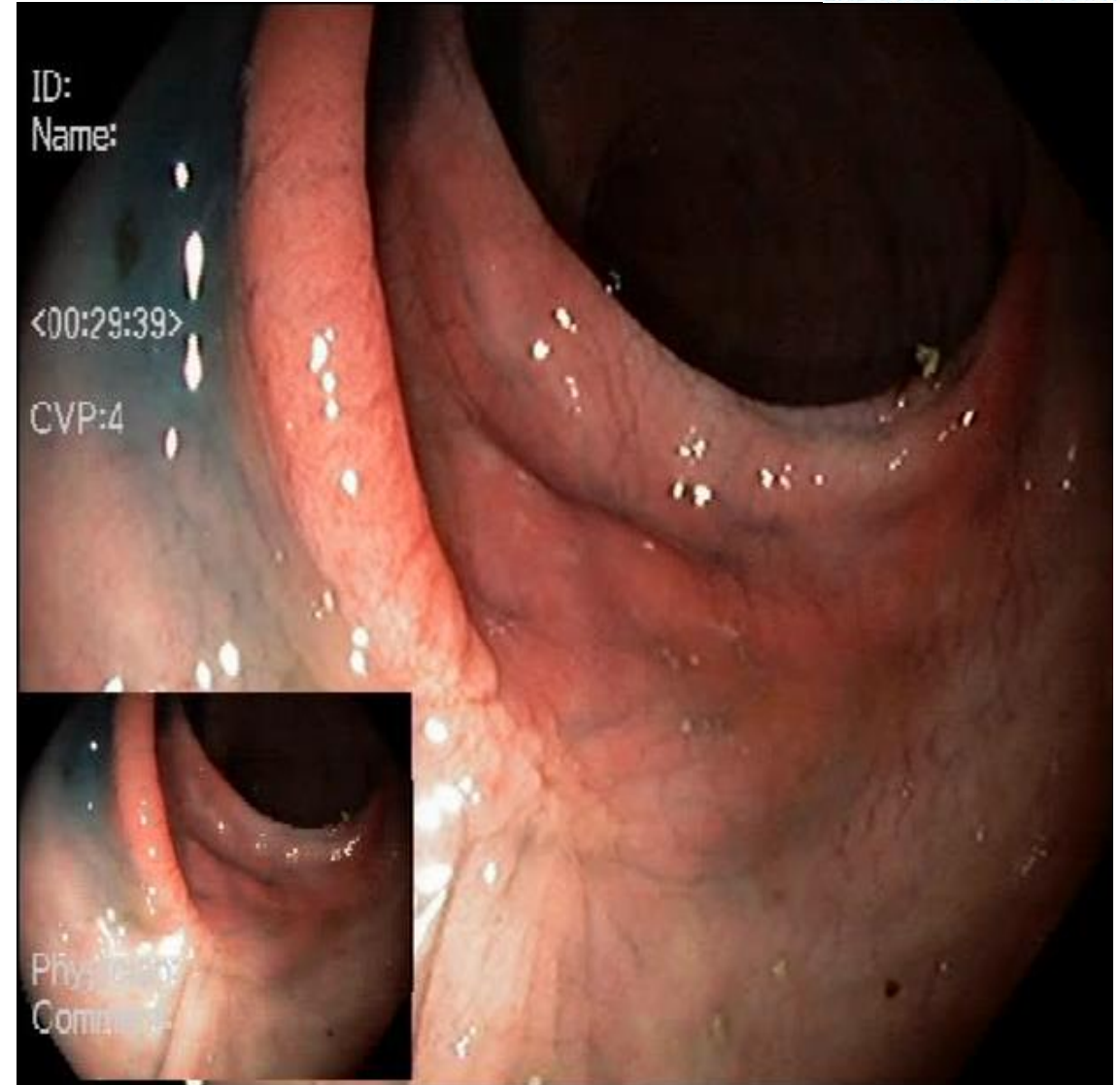
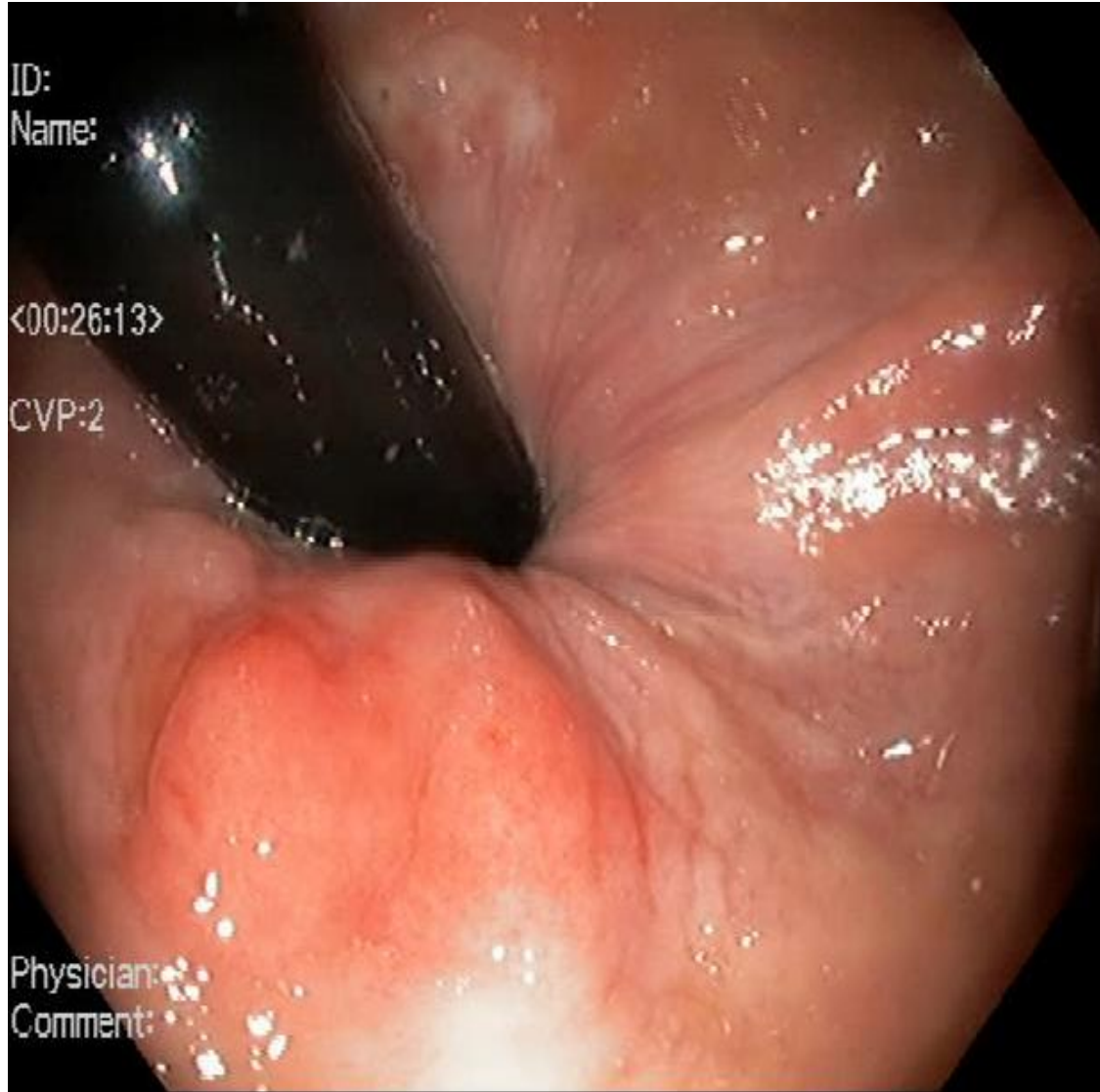
- Male 23 yo.
- Bleeding and rectal prolapse
- Extension > 30mm
- Previous biopsy outside of our Institute “Tubular adenoma”
- Type: 0-Is; Nodular mucosa
- Plan: EMRP
- Location: Rectum until anal margin



Complex Colon Polyps: EMR From polyps Prolapse syndrom 3 months control



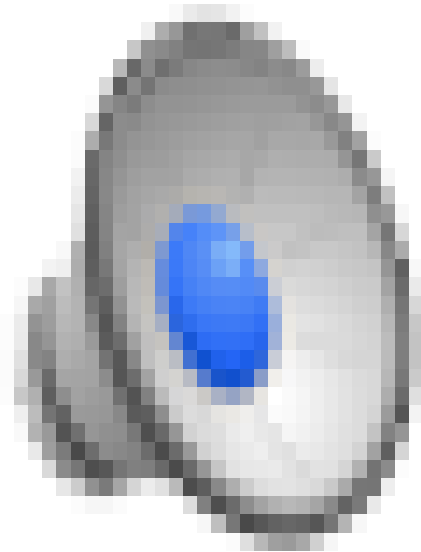
ENDOSCOPIA GASTROINTESTINAL



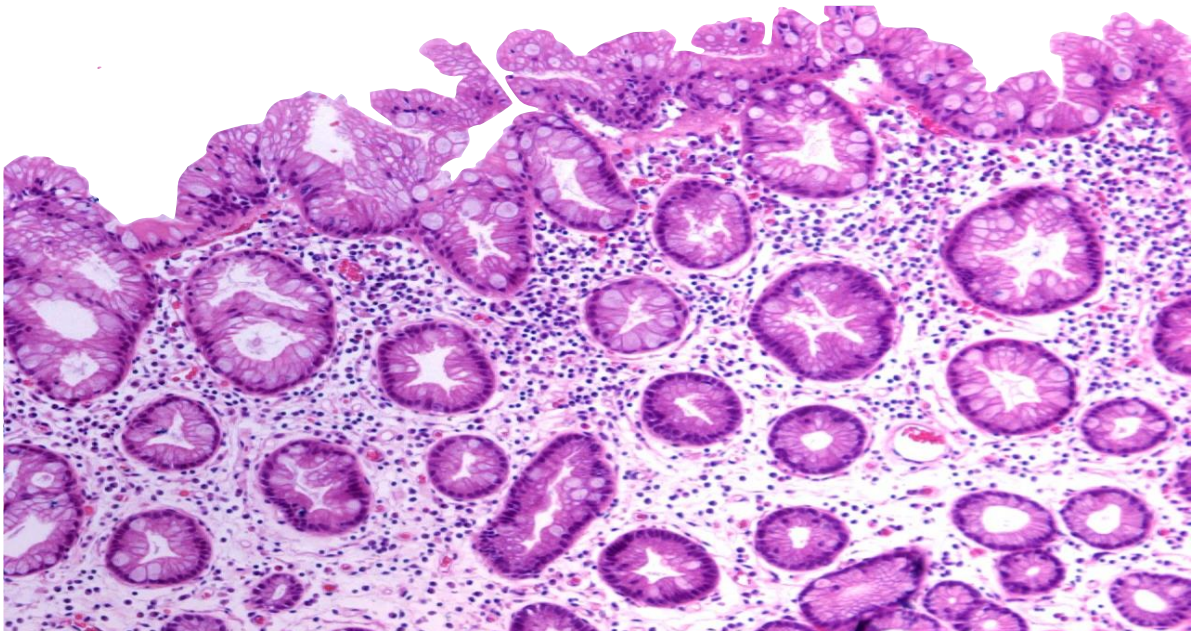
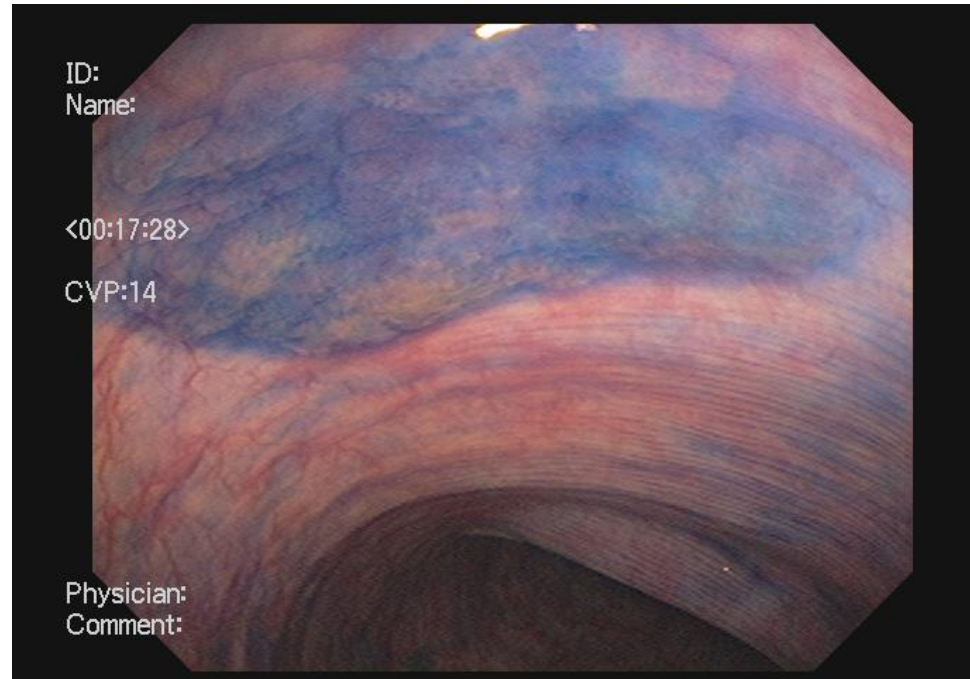
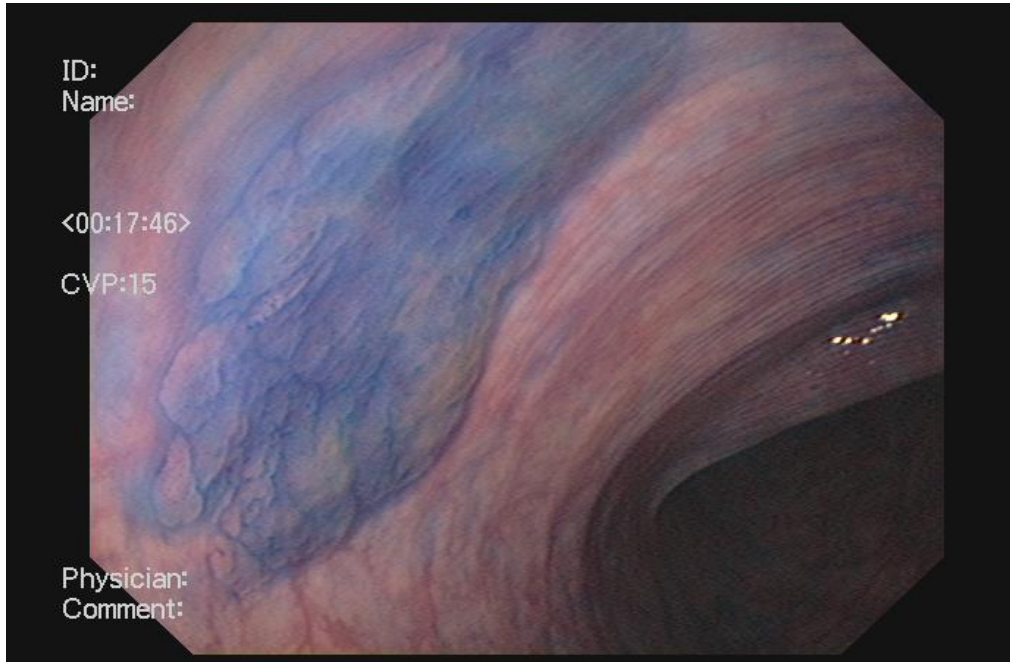
Complex Colon Polyps: EMR From Serrated Adenoma



ENDOSCOPIA GASTROINTESTINAL



- Female 55 yo.
- Screening ;
Asymptomatic
- Extension >10mm
- Type: 0-IIa; “Blue polyp”
- Plan: EMR
- Location: Ascending colon

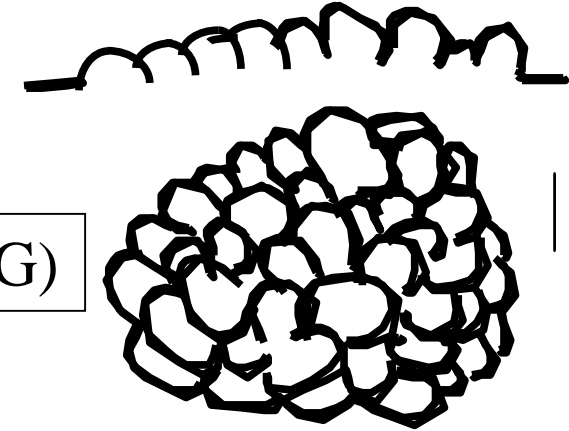
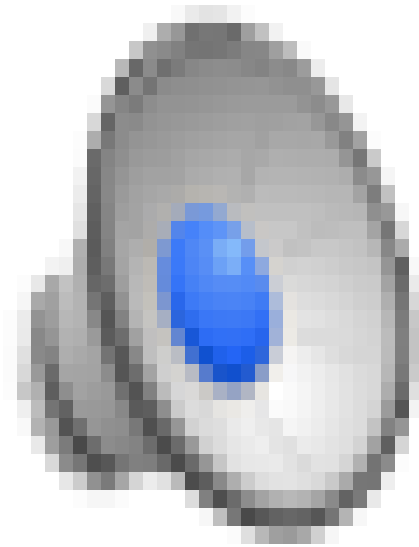


**Serrated Polyp
(traditional)**

Complex Colon Polyps: Pro - Piecemeal case from NPCRCP



ENDOSCOPIA GASTROINTESTINAL



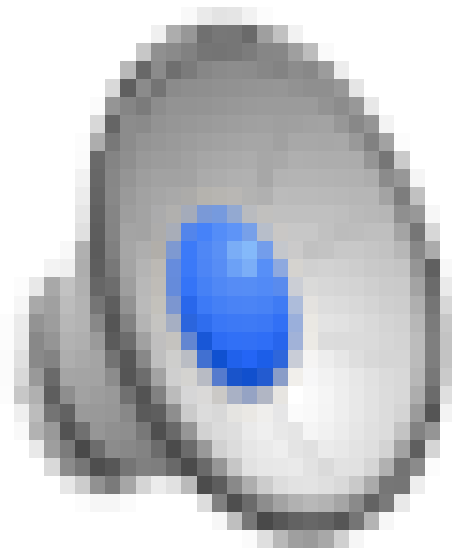
IIa(LST-G)

- Female 60 yo.
- Rectal bleeding
- Extension more than 30mm
- Type: LST
- Plan: EMR
- Location: Rectum until anal margin

Control Pro - Piecemeal case after 3Mo



ENDOSCOPIA GASTROINTESTINAL

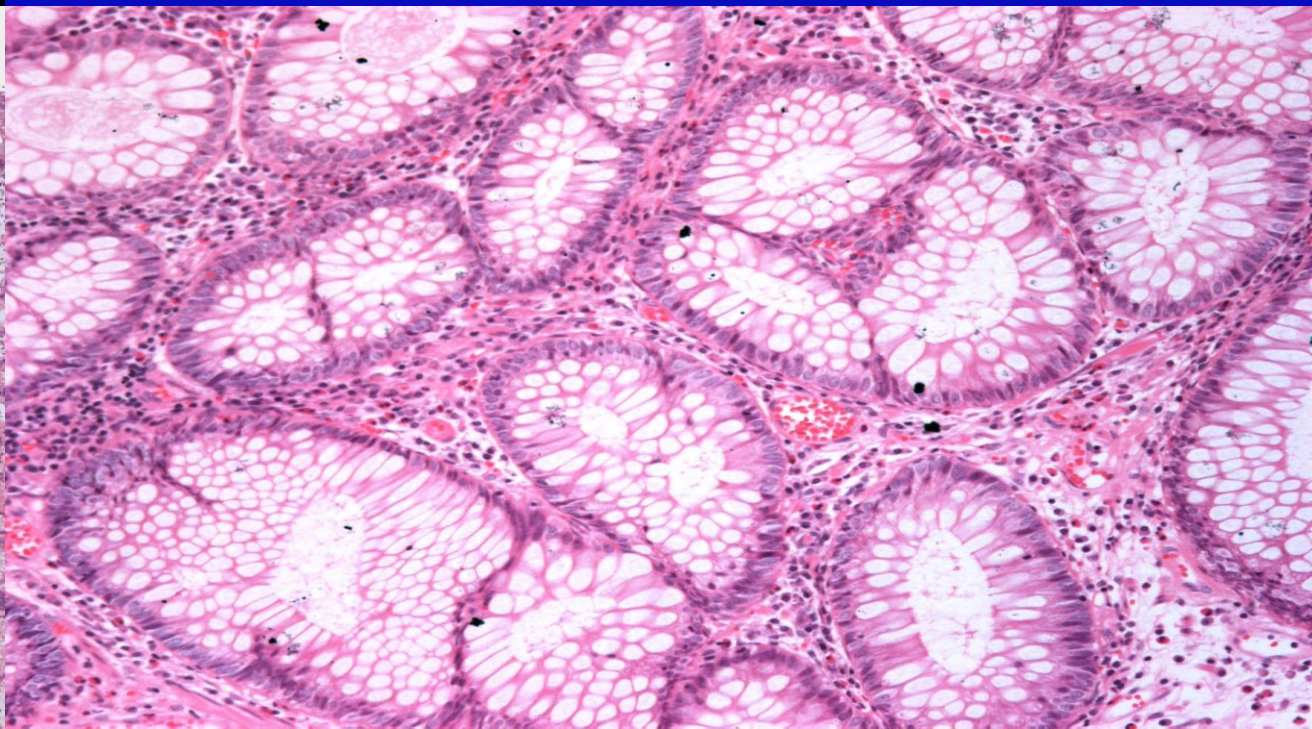
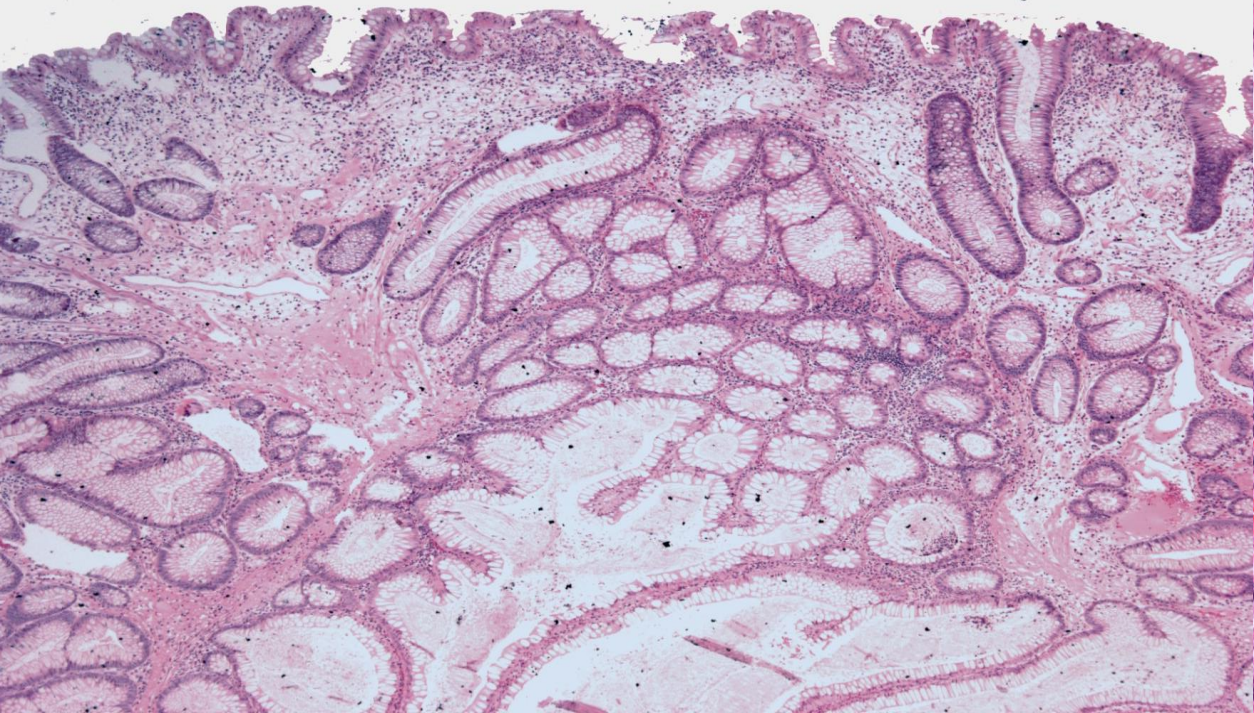
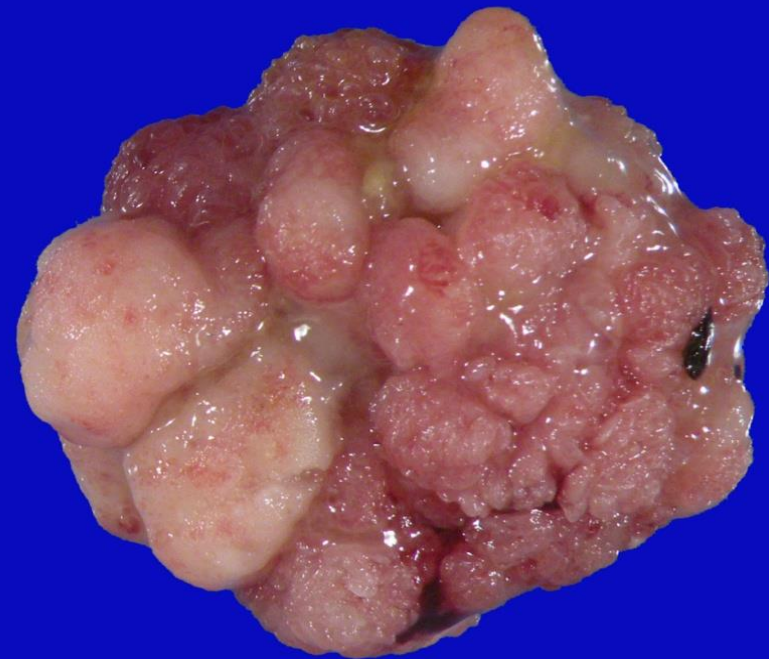
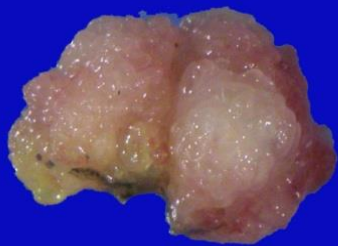
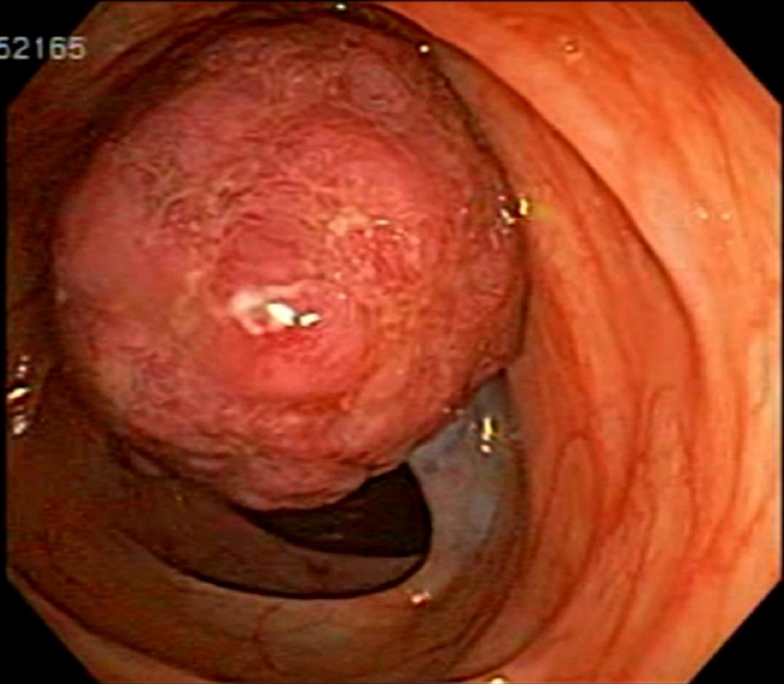


- **Control colonoscopy**
- **Residual LST**
- **(< 10mm)**
- **Type: 0-Is**
- **Plan: Avulsion and APEC**
- **Location: Rectum**

252165



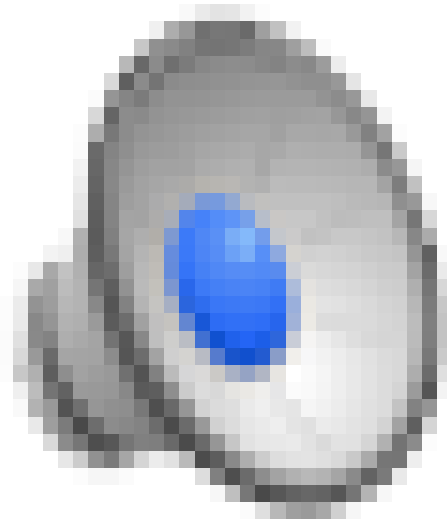
252165



Complex Colon Polyps: EMR Complications



ENDOSCOPIA GASTROINTESTINAL



- Sessile polyp that is difficult to remove due to their size (>4cm).
- Location; sigmoid colon
- Pathology: Tubulo-villous
- Plan: EMRP
- Complication: Bleeding
- Treatment: Coagrasper and

Hemoclips (Stop bleeding)



CONCLUSIONS

- EMR (PAIS) is significantly superior to CSP for achieving complete endoscopic resection of small colo-rectal polyps
- Multiple techniques are now available for the resection of difficult polyps (Individualize case by case) in order to maximize oncological safety, efficacy and minimize complications
- Secret of EMR is do it and then do it and then do it... (Expert advice)



Thanks